

AIDS Morbidity and Mortality

In 1999, 8,008 new AIDS cases were confirmed in New York State, compared to 9,047 new cases by the end of 1998, and 13,795 new cases by the end of 1997. Similar decreases in new cases have been noted throughout the country and attributed to the effect of new treatments for HIV infection and related conditions. These treatments lengthen the asymptomatic period for individuals with HIV infection, and have been paralleled by a decrease in deaths among people with AIDS. Particularly dramatic declines have been noted in perinatally acquired pediatric AIDS, resulting from a number of factors including the use of new treatments for pediatric HIV infection and the increased use of prenatal antiretroviral therapies to prevent perinatal HIV transmission. The number of people living with AIDS in New York State, however, continues to mount, reaching more than 55,000 by the end of 1999.

Since the beginning of the epidemic, more than 139,000 AIDS cases have been confirmed in New York State, accounting for more than 19 percent of the 733,374 AIDS cases confirmed in the United States through December 1999 (see Figure 9-3). New York State also has the highest AIDS incidence rate of any state, with more than 44 AIDS cases confirmed in 1999 per 100,000 population (see Figure 9-2; for an explanation of rates, see page 101). Cases diagnosed in New York vary from those reported in the United States as a whole; New York reports a higher proportion of cases among injecting drug users (IDUs) (43.2% vs. 25.1%), females (22.8% vs. 16.9%) and Hispanics (30.0% vs. 18.2%) (see Figure 9-3). Of total cases diagnosed in these groups in the U.S., New York reports nearly one-third of all cases among IDUs and Hispanics, and one-quarter of all cases among women.

Eighty-three percent of cases confirmed in New York State in 1999 are among people of color, and 76.2 percent are residents of New York City (see Figure 9-4b). While the AIDS epidemic is concentrated in urban populations throughout the state, AIDS has been reported from all counties in New York, both urban and rural (see Figure 10-1).

AIDS Surveillance

AIDS Surveillance

A uniform surveillance case definition for AIDS was established by the CDC in the early 1980s, and has been modified three times (1985, 1987, and 1993), each time expanding the range of AIDS-indicator diseases and conditions, and incorporating HIV diagnostic tests to improve the sensitivity and specificity of the definition. In 1993 the definition was expanded to include HIV-infected adults and adolescents with CD4+ T-lymphocyte counts of less than 200 cells per cubic millimeter, or less than 14 percent of total lymphocytes, and those diagnosed with pulmonary tuberculosis, recurrent pneumonia or invasive cervical cancer. The case definition was not expanded for pediatric cases (those under 13 years of age), but the laboratory and diagnostic criteria for the 1987 pediatric case definition were updated in 1994.

Particularly due to the new immunologic criterion of the 1993 expanded case definition, the number of cases reported to the health departments grew considerably following its implementation. Because all earlier case definitions required the diagnosis of an AIDS-defining opportunistic condition, cases diagnosed under the immunologic criterion (prior to the

development of an opportunistic condition) were effectively diagnosed earlier in the spectrum of HIV disease than other AIDS cases. The effect of this new criterion was to include prevalent as well as incident AIDS cases, creating a bolus of cases around 1993. However, this bolus had almost entirely dissipated by 1997.

The New York State Department of Health Bureau of HIV/AIDS Epidemiology and the New York City Department of Health Office of HIV and AIDS Surveillance receive reports of suspect and confirmed AIDS cases from health care providers under Section 24.1 of the New York State Sanitary Code, which mandates the reporting of suspect and confirmed AIDS cases to the state health commissioner. Beginning in 1994, CD4 testing laboratories also report individuals whose absolute CD4+ cell counts are below 200 cells/mm³ or below 14 percent of total lymphocytes. Confidentiality of all reports is protected under Public Health Law § 206(l)(j).

Surveillance of AIDS relies on the voluntary reporting of potential cases from these sources, and the New York State AIDS Case Surveillance Registry, maintained by the New York State Department of Health, accurately represents the reports received by Health Department officials. Surveillance data are not

100 percent complete because not all AIDS cases are reported to the registry. In addition, the AIDS Case Registry may not accurately reflect all those receiving AIDS care in New York State; many individuals with AIDS diagnosed outside of New York State may currently receive care here, while individuals originally diagnosed in New York State may receive care elsewhere.

Information on HIV transmission category comes from documentation in a patient's medical record, and largely reflects information provided by the patient. Multiple risks are not documented except for men who report both homosexual contact and injection drug use. All other persons who report multiple risks are classified in the exposure category listed highest in a hierarchy of risks developed by the Centers for Disease Control and Prevention. For adults, men who have sex with men is first in this hierarchy, followed by injection drug users, men who have sex with men and inject drugs, individuals with hemophilia or blood-clotting disorders, individuals heterosexually exposed, and individuals who received blood transfusions or tissue transplants. This classification scheme produces a potential underrepresentation of heterosexual HIV transmission. Further impeding an accurate representation of AIDS among

AIDS Surveillance

heterosexually exposed individuals are comparatively stringent requirements for classifying heterosexual HIV transmission (see page 177 for further discussion). For these reasons, readers should recognize that data on transmission categories presented here are impacted by these administrative guidelines.

AIDS case rates are presented throughout this document to compare the number of AIDS cases to the size of the specific population or subpopulation. For example, 100 AIDS cases diagnosed in a large population (for example, New York State residents) would yield a relatively low AIDS case rate; in contrast, 100 cases diagnosed in a small population (for example, Native American residents of the Albany Ryan White Region) would yield a large rate. Here, rates are presented per 100,000 population for consistency of comparison, and all population data come from the 1990 U.S. Census.

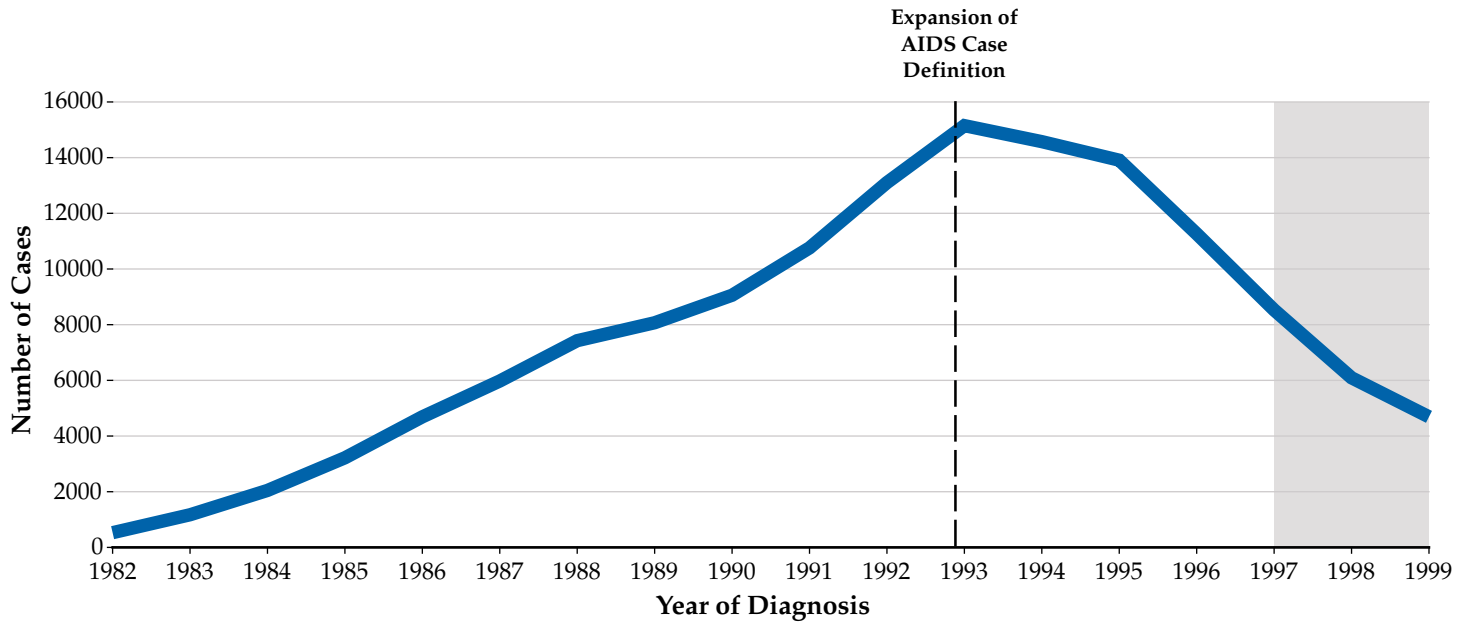
All data presented here are from the New York State AIDS Surveillance Case Registry, the New York City Office of HIV and AIDS Surveillance, the Centers for Disease Control and Prevention (CDC) and from neighboring states where indicated. Where New York State AIDS case data are presented with data from other regions (e.g., national data), data reflect cases

diagnosed and confirmed by Surveillance through December 1999 (see Figures 9-2 through 9-5). In all other presentations, data updates through March 2000 on cases diagnosed through December 1999 are used, allowing for some additional time to confirm AIDS cases diagnosed in 1999. Therefore, New York State data presented in tables with data from other regions will be lower than data presented for New York State alone. Because of the long lag in AIDS case reporting and the time required to confirm reported cases, AIDS case data for 1998 and 1999 are still considered incomplete.

Figure 9-1

AIDS Incidence by Year of Diagnosis

New York State, Cases Confirmed through March 2000



Year of Diagnosis	Number of Cases
1982	544
1983	1,189
1984	2,053
1985	3,224
1986	4,695
1987	5,982
1988	7,418
1989	8,066
1990	9,067
1991	10,756
1992	13,102
1993*	15,147
1994	14,570
1995	13,902
1996	11,272
1997	8,537
1998*	6,103
1999*	4,689
Total	140,316

* On January 1, 1993, the AIDS Surveillance Case Definition for adults with HIV infection was expanded to include pulmonary tuberculosis, recurrent pneumonia, invasive cervical cancer and severe immunodeficiency (see second page of AIDS Morbidity and Mortality narrative). Data for 1998 and 1999 are incomplete due to lag in case reporting and time required for case confirmation.

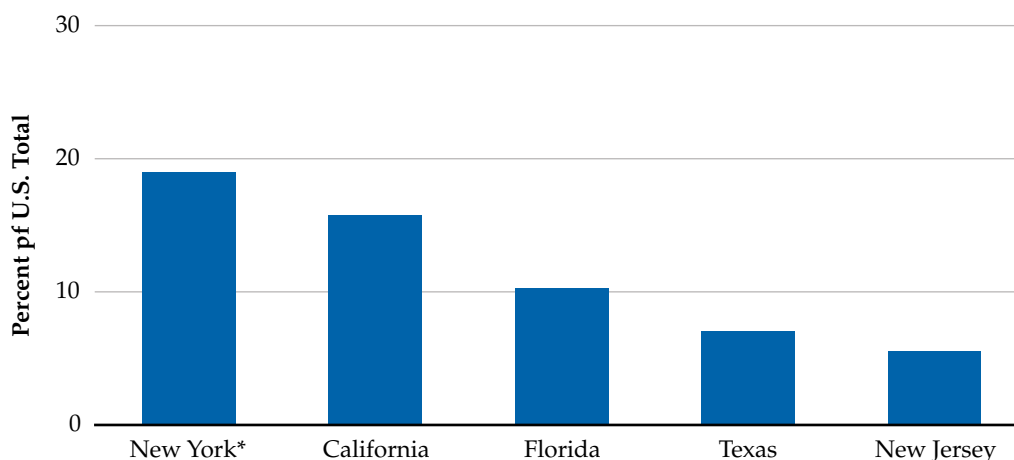
Figure 9-2

States That Have Reported 5,000 or More AIDS Cases

Cases Confirmed through December 1999

Area	Total Cases	Percent of National Total	Cases Confirmed in 1999	
			Number	Rate per 100,000 population
New York*	139,063	19.0	8,008	44.5
California	115,366	15.7	5,445	16.4
Florida	75,539	10.3	5,468	36.2
Texas	51,449	7.0	3,181	15.9
New Jersey	40,216	5.5	2,043	25.1
Illinois	23,220	3.2	1,557	12.8
Pennsylvania	22,988	3.1	1,967	16.4
Georgia	21,628	2.9	1,678	21.5
Massachusetts	15,218	2.1	1,454	23.5
District of Columbia	12,231	1.7	838	161.5
Virginia	12,206	1.7	943	13.7
Louisiana	11,970	1.6	854	19.5
Connecticut	11,001	1.5	586	17.9
Ohio	10,792	1.5	547	4.9
Michigan	10,582	1.4	649	6.6
North Carolina	9,745	1.3	794	10.4
Washington	8,998	1.2	360	6.3
Missouri	8,769	1.2	531	9.7
South Carolina	8,722	1.2	959	24.7
Tennessee	7,738	1.1	759	13.8
Arizona	6,983	1.0	880	18.4
Colorado	6,761	0.9	319	7.9
Alabama	5,792	0.8	476	10.9
Indiana	5,762	0.8	363	6.1

States with Largest Share of U.S. AIDS Cases



* New York State data are from the New York State Department of Health Bureau of HIV/AIDS Epidemiology. All other state data are from the U.S. Centers for Disease Control and Prevention.

Figure 9-3

Cumulative AIDS Cases* by Exposure Category, Race/Ethnicity, Gender and Age at Diagnosis

United States and New York State, Cases Confirmed through December 1999

	Cumulative United States		Cumulative New York State	
	Number	Percent	Number	Percent
Exposure Category				
Men Who Have Sex With Men	341,597	46.6	41,088	29.5
Injecting Drug Users	184,428	25.1	60,091	43.2
Men Who Have Sex With Men and Inject Drugs	46,582	6.3	4,063	2.9
Adult Hemophilia/ Coagulation Disorder	5,075	0.7	559	0.4
Heterosexual Contact	74,477	10.2	12,572	9.0
Adult Transfusion/ Tissue Recipient	8,531	1.2	669	0.5
Adult Undetermined	63,965	8.7	17,869	12.8
Pediatric- Perinatal Transmission	7,943	1.1	2,059	1.5
Pediatric- All Other	775	0.1	93	0.1
Race/Ethnicity				
White	318,354	43.4	37,879	27.2
Black	272,881	37.2	58,353	42.0
Hispanic	133,703	18.2	41,712	30.0
Asian/Pacific Islander	5,347	0.7	814	0.6
Native American/ Alaskan Native	2,132	0.3	75	0.1
Unknown	957	0.1	230	0.2
Gender				
Male	609,326	83.1	107,337	77.2
Female	124,045	16.9	31,726	22.8
Age at Diagnosis				
Pediatrics	8,718	1.2	2,152	1.5
Adults	724,656	98.8	136,911	98.5
Total	733,374	100.0	139,063	100.0

Figure 9-3

Cumulative AIDS Cases* by Exposure Category, Race/Ethnicity, Gender and Age at Diagnosis

United States and New York State, Cases Confirmed through December 1999

	Cumulative New York City		Cumulative Rest of State	
	Number	Percent	Number	Percent
Exposure Category				
Men Who Have Sex With Men	34,225	30.5	6,863	25.6
Injecting Drug Use	48,587	43.3	11,504	43.0
Men Who Have Sex with Men and Inject Drugs	2,958	2.6	1,105	4.1
Adult Hemophilia/ Coagulation Disorder	376	0.3	183	0.7
Heterosexual Contact	10,132	9.0	2,440	9.1
Adult Transfusion/ Tissue Recipient	369	0.3	300	1.1
Adult Undetermined	13,781	12.3	4,088	15.3
Pediatric- Perinatal Transmission	1,807	1.6	252	0.9
Pediatric- All Other	65	0.1	28	0.1
Race/Ethnicity				
White	27,263	24.3	10,616	39.7
Black	47,872	42.6	10,481	39.2
Hispanic	36,195	32.2	5,517	20.6
Asian/Pacific Islander	757	0.7	57	0.2
Native American/ Alaskan Native	39	<0.1	36	0.1
Unknown	174	0.2	56	0.2
Gender				
Male	85,829	76.4	21,508	80.4
Female	26,471	23.6	5,255	19.6
Age at Diagnosis				
Pediatrics	1,872	1.7	280	1.0
Adults	110,428	98.3	26,483	99.0
Total	112,300	100.0	26,763	100.0

* New York State data are from the New York State Department of Health Bureau of HIV/AIDS Epidemiology. United States data are from the U.S. Centers for Disease Control and Prevention.

Figure 9-4a

AIDS Cases Confirmed in 1998* by Exposure Category, Race/Ethnicity, Gender and Age at Diagnosis

United States and New York State, Cases Confirmed through December 1998

	Cases Confirmed in 1998							
	United States		New York State		New York City		Rest of State	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Exposure Category								
Men Who Have Sex With Men	16,642	34.5	1,765	19.5	1,453	19.3	312	20.6
Injecting Drug Use	11,070	22.9	2,983	33.0	2,408	32.0	575	38.0
Men Who Have Sex with Men and Inject Drugs	1,984	4.1	137	1.5	78	1.0	59	3.9
Adult Hemophilia/Coagulation Disorder	162	0.3	31	0.3	24	0.3	7	0.5
Heterosexual Contact	6,763	14.0	1,079	11.9	856	11.4	223	14.7
Adult Transfusion/Tissue Recipient	293	0.6	45	0.5	34	0.5	11	0.7
Adult Undetermined	11,000	22.8	2,887	31.9	2,604	34.6	283	18.7
Pediatric-Maternal Transmission	341	0.7	104	1.1	66	0.9	38	2.5
Pediatric-All Other	41	0.1	16	0.2	11	0.1	5	0.3
Race/Ethnicity								
White	16,118	33.4	1,895	20.9	1,350	17.9	545	36.0
Black	21,752	45.1	4,198	46.4	3,503	46.5	695	45.9
Hispanic	9,650	20.0	2,866	31.7	2,602	34.5	264	17.4
Asian/Pacific Islander	390	0.8	66	0.7	65	0.9	1	0.1
Native American/Alaskan Native	148	0.3	6	0.1	3	<0.1	3	0.2
Unknown	211	0.4	16	0.2	11	0.1	5	0.3
Gender								
Male	37,076	76.8	6,366	70.4	5,288	70.2	1,078	71.2
Female	11,190	23.2	2,681	29.6	2,246	29.8	435	28.8
Age at Diagnosis								
Pediatrics	382	0.8	120	1.3	77	1.0	43	2.8
Adults	47,887	99.2	8,927	98.7	7,457	99.0	1,470	97.2
Total	48,269	100.0	9,047	100.0	7,534	100.0	1,513	100.0

* Confirmation year reflects year in which AIDS case diagnosis was confirmed and may not reflect year of AIDS diagnosis. New York State data are from the New York State Department of Health Bureau of HIV/AIDS Epidemiology. United States data are from the U.S. Centers for Disease Control and Prevention.

Figure 9-4b

AIDS Cases Confirmed in 1999* by Exposure Category, Race/Ethnicity, Gender and Age at Diagnosis

United States and New York State, Cases Confirmed through December 1999

Exposure Category	Cases Confirmed in 1999							
	United States		New York State		New York City		Rest of State	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Exposure Category								
Men Who Have Sex With Men	15,464	33.3	1,486	18.6	1,178	19.3	308	16.2
Injecting Drug Use	10,138	21.8	2,710	33.8	2,059	33.7	651	34.2
Men Who Have Sex with Men and Inject Drugs	1,806	3.9	115	1.4	71	1.2	44	2.3
Adult Hemophilia/Coagulation Disorder	151	0.3	18	0.2	14	0.2	4	0.2
Heterosexual Contact	7,139	15.4	1,142	14.3	898	14.7	244	12.8
Adult Transfusion/Tissue Recipient	256	0.6	27	0.3	24	0.4	3	0.2
Adult Undetermined	11,183	24.1	2,494	31.1	1,847	30.3	647	34.0
Pediatric-Maternal Transmission	232	0.5	11	0.1	9	0.1	2	0.1
Pediatric-All Other	31	0.1	5	0.1	3	<0.1	2	0.1
Race/Ethnicity								
White	14,813	31.9	1,318	16.5	831	13.6	487	25.6
Black	21,900	47.2	3,976	49.7	3,071	50.3	905	47.5
Hispanic	9,021	19.4	2,647	33.1	2,148	35.2	499	26.2
Asian/Pacific Islander	368	0.8	49	0.6	47	0.8	2	0.1
Native American/Alaskan Native	178	0.4	8	0.1	2	<0.1	6	0.3
Unknown	120	0.3	10	0.1	4	0.1	6	0.3
Gender								
Male	35,482	76.5	5,649	70.5	4,194	68.7	1,455	76.4
Female	10,918	23.5	2,359	29.5	1,909	31.3	450	23.6
Age at Diagnosis								
Pediatrics	263	0.6	16	0.2	12	0.2	4	0.2
Adults	46,137	99.4	7,992	99.8	6,091	99.8	1,901	99.8
Total	46,400	100.0	8,008	100.0	6,103	100.0	1,905	100.0

* Confirmation year reflects year in which AIDS case diagnosis was confirmed and may not reflect year of AIDS diagnosis. New York State data are from the New York State Department of Health Bureau of HIV/AIDS Epidemiology. United States data are from the U.S. Centers for Disease Control and Prevention.

Figure 9-5

AIDS Cases and Rates per 100,000 Population Confirmed in 1998 and 1999 and Cumulative Totals by Age Group in the United States, New York State* and Surrounding States[†]

Cases Confirmed through December 1998 and December 1999

	Confirmed in 1998					Cumulative Totals		
	Total	Rate per 100,000 Population	Percent Injecting Drug User	Percent Men Who Have Sex With Men	Percent Heterosexual	Adult/ Adolescent	Children <13 years	Cumulative Total
United States	48,269	17.6	23	34	14	679,739	8,461	688,200
New York	8,008	50.0	34	20	13	128,940	2,136	131,076
New Jersey	2,134	26.3	33	16	19	37,517	713	38,230
Connecticut	666	20.3	45	20	25	10,231	173	10,404
Massachusetts	924	15.0	38	27	12	13,610	199	13,809
Vermont	20	3.4	31	31	8	344	4	348
Pennsylvania	1,740	14.5	40	32	19	20,755	285	21,040

	Confirmed in 1999					Cumulative Totals		
	Total	Rate per 100,000 Population	Percent Injecting Drug User	Percent Men Who Have Sex With Men	Percent Heterosexual	Adult/ Adolescent	Children <13 years	Cumulative Total
United States	46,400	16.7	22	33	15	724,656	8,718	733,374
New York	7,942	44.1	35	19	15	136,864	2,154	139,018
New Jersey	2,043	25.1	33	14	35	39,481	735	40,216
Connecticut	586	17.9	37	20	19	10,827	174	11,001
Massachusetts	1,454	23.5	35	28	12	15,012	206	15,218
Vermont	20	3.4	13	69	13	363	5	368
Pennsylvania	1,967	16.4	39	29	24	22,678	310	22,988

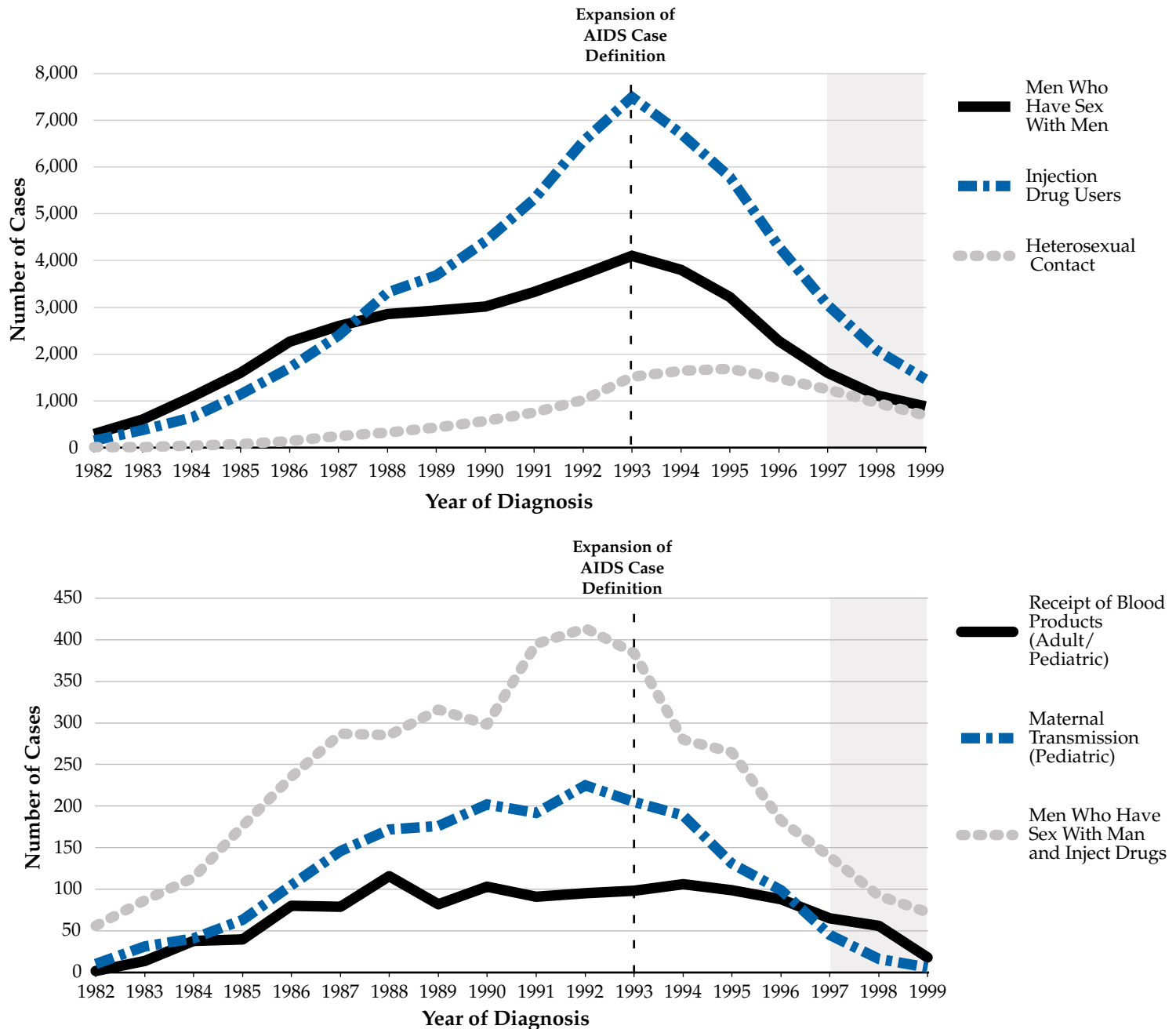
* All New York State data are from the New York State Department of Health, Bureau of HIV/AIDS Epidemiology. Incidence rate calculations are based on 1990 U. S. Census data.

† Data on HIV exposure categories were provided by each individual state. All other data are from the Centers for Disease Control and Prevention's (CDC) HIV/AIDS Surveillance Report for years ending 1998 and 1999. CDC-calculated incidence rates are based on official post census estimates from the U. S. Bureau of Census.

Figure 9-6

AIDS Cases by Exposure Category and Year of Diagnosis*

New York State, Cases Confirmed through March 2000



On January 1, 1993, the AIDS Surveillance Case Definition for adults with HIV infection was expanded to include pulmonary tuberculosis, recurrent pneumonia, invasive cervical cancer and severe immunodeficiency (see second page of AIDS Morbidity and Mortality narrative). Data for 1998 and 1999 are incomplete due to lag in case reporting and time required for case confirmation.

* Please note that scales of graphs are not consistent across exposure categories.

